

REMARKS

Claims 1-35 are presented for further examination. Claims 1-4, 8, 9, 16, 21, 22, and 30 have been amended.

In the Office Action mailed February 2, 2004, the Examiner rejected claims 1-12, 14-16, 19, 21-23, and 25-28 under 35 U.S.C. § 103(a) as obvious over U.S. Patent No. 5,874,902 ("Heinrich et al.") in view of U.S. Patent No. 6,317,028 ("Valiulis"). Claims 13, 17-18, and 20 were rejected as obvious over Heinrich et al. in view of Valiulis and further in view of U.S. Patent No. 6,181,248 ("Fockens"). Claims 24 and 29 were rejected as obvious over Heinrich et al. in view of Valiulis and further in view of U.S. Patent No. 6,412,207 ("Crye et al."). Claims 30-35 were rejected as obvious in view of Heinrich et al., in view of Valiulis, and further in view of Crye et al.

Applicants respectfully disagree with the bases for the rejections and request reconsideration and further examination of the claims.

The Present Invention

The present invention is directed to the use of radio frequency communications to monitor and control remote objects. These objects can include a transponder device, such as an RFID tag, a weapon, or other objects that may have operational features. A tag formed in accordance with the present invention may have a single antenna or multiple antennas for receiving multiple signals at different frequencies (see specification, page 4, lines 14-15). A dual-frequency RF tag can be used for receiving interrogation signals and control signals, such as a disable signal, and for extracting power from one or both signals. In accordance with another aspect of the invention, the RFID device and a system in which the device is associated, reviews an interrogation signal from an interrogator at a first frequency from which power is extracted for operation, and the interrogator transmits interrogation signals and control signals at a second frequency or at a second and a third frequency, respectively, which are processed by the RFID device (see specification, page 6, lines 18-24).

Heinrich et al., U.S. Patent No. 5,874,902, teaches a radio frequency identification transponder with electronic circuit enabling/disabling capability. Heinrich et al. teaches a tag

configured to receive a single signal at a single frequency that causes the tag to either store information or store information and enable or disable an associated object. Heinrich et al. does not teach or suggest transmitting and receiving two signals, much less transmitting two signals on different frequencies or transmitting the two signals simultaneously and the reception and processing of the same at the RFID tag.

Valiulis, U.S. Patent No. 6,317,028, is directed to electronic identification, control, and a security system and method for consumer electronics and the like that includes transmitting a password via radio frequency to a manufactured article and disabling operation of each manufactured article in response to receipt of the password. Valiulis teaches receiving a
10 signal on a single antenna at a single frequency that is serially processed by the RFID device.

Crye et al., U.S. Patent No. 6,412,207, teaches firearm safety and control systems in which a firearm is enabled or disabled upon the sensing or not sensing the presence of or communicating or not communicating with an external communication and/or enabling device. Crye et al. does not teach or suggest communicating with the external device on two radio frequencies, simultaneously transmitting and processing signals at two frequencies, or the use of dual antennas for receiving and transmitting dual signals or concurrently receiving and transmitting dual or even triple signals.

Discussion of Claims

20 Independent claim 1 is directed to a radio frequency identification device that
24 comprises a receiver circuit configured to receive a radio frequency interrogation signal and to
28 return a modulated radio frequency signal by continuous-wave backscatter on an antenna circuit,
and a control circuit further configured to receive on the antenna circuit a disable signal
concurrent with the interrogation signal and to process the disable signal to render the RFID
device permanently inoperable. As discussed above, nowhere does Heinrich et al. or Valiulis,
taken alone or in any combination thereof, teach concurrent reception of a radio frequency
interrogation signal and a disable signal on an antenna circuit by separate circuits, i.e., a receiver
circuit and a control circuit, and to process the disable signal on the control circuit to render the
RFID device permanently inoperable. Claim 3, which depends from claim 1, recites the antenna

circuit as comprising first and second antennas. As discussed above, nowhere do Heinrich et al. or Valiulis, taken alone or in any combination thereof with each other, teach or suggest the combination recited in claim 1 and dependent claims 2-7. In view of the foregoing, applicants submit that claims 1-7 are allowable over the references cited and applied by the Examiner.

Independent claim 8 is directed to a radio frequency identification system that includes an interrogator configured to generate a radio frequency interrogation signal at a first frequency and a radio frequency disable signal at a second frequency, and a passive RFID tag that is configured to, *inter alia*, receive and process the interrogation signal and the disable signal simultaneously. As discussed above, nowhere do Heinrich et al. or Valiulis, taken alone or in any combination thereof, teach or suggest generating a radio frequency interrogation signal at a first frequency and a radio frequency disable signal at a second frequency that is processed simultaneously by an RFID tag. Applicants respectfully submit that claims 8-12 and 14-15 are allowable over these references. Dependent claim 13 is also allowable over the combination of Heinrich et al. and Valiulis with Fockens et al. for the reasons discussed above with respect to claim 8.

Independent claim 16 is directed to a method for disabling a radio frequency identification device that comprises transmitting an interrogation signal at a first frequency and simultaneously transmitting a disable signal to the device at a second frequency; receiving the interrogation signal and the disable signal at the device; and processing the interrogation signal to extract power therefrom and processing the disable signal to render the device irreversibly non-responsive. Applicants respectfully submit that claim 16, as well as dependent claims 17-21, which depend from claim 16, are all allowable for the reasons discussed above.

Independent claims 22 and 30 both include limitations of the receiver circuit configured to receive on different frequencies interrogation signals and control signals. Applicants respectfully submit that these claims and all claims depending therefrom are allowable for the reasons why claim 1 is allowable.


In view of the foregoing, applicants respectfully submit that all of the claims in this application are now in condition for allowance. In the event the Examiner finds minor informalities that can be resolved by telephone conference, the Examiner is urged to contact

applicants' undersigned representative by telephone at (206) 622-4900 in order to expeditiously resolve prosecution of this application. Consequently, early and favorable action allowing these claims and passing this case to issuance is respectfully solicited.

The Director is authorized to charge any additional fees due by way of this Amendment, or credit any overpayment, to our Deposit Account No. 19-1090.

Respectfully submitted,

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